

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Exploring Quadratic Graphs

### Part One: Concept Check:

1. What is the standard form of a quadratic function?	2. What is the parent quadratic function?
3. What is the vertex of the parent quadratic function?	4. If $a$ is negative, as in the function, $y = -4x^2$ , does the parabola open upward or downward?
5. If $a$ is positive, as in the function $y = 0.5x^2$ , does the function have a maximum or minimum vertex?	6. Which has a more narrow parabola, the function $y = -10x^2$ or the function $y = 1/10x^2$ ?

### Part Two: Fill in the Table:

QF	Does the QF open upward or downward?	Is the vertex a minimum or maximum?	What are the coordinates of the vertex?	Is the QF narrower, wider or the same as parent QF?
$y = x^2$				
$y = -x^2$				
$y = -5x^2 + 2$				
$y = 2x^2 - 8$				
$y = -0.2x^2$				
$y = 20x^2 + 1$				

### Part Three: Sketch:

 Sketch the parent function below:

